



Faculty of Computer Science and Information Technology

# **ISELL: SELLING USED AND NEW ITEMS FOR UNIMAS COMMUNITY**

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Bachelor of Computer Science with Honors

(Network Computing)

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11 AUGUST 2020

# **ISELL: SELLING USED AND NEW ITEMS FOR UNIMAS COMMUNITY**

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**This project is submitted in partial fulfillment of the  
requirements for the degree of  
Bachelor of Computer Science with Honours (Network Computing)**

**Faculty of Computer Science and Information Technology**

**UNIVERSITI MALAYSIA SARAWAK**

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# **ISELL: SELLING USED AND NEW ITEMS FOR UNIMAS COMMUNITY**

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**Projek ini merupakan salah satu keperluan untuk Ijazah Sarjana Muda Sains  
Komputer dan Teknologi Maklumat (Pengkomputeran Rangkaian)**

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## **Abstract**

*Electronic commerce, conjointly called e-commerce, could be a kind of business wherever shopping for and merchandising of a product is conducted over electronic systems like the web. The primary aim for proposed project is to associate automated commerce web site to sale product and services online for University Malaysia Sarawak (UNIMAS) community. “iSell” is an e-commerce web system that will ease the process of selling and purchasing products through online platform within UNIMAS community. “iSell” helps UNIMAS community especially students to buy a more affordable price compared to the market price. “iSell” has been developed for enabling a small business in UNIMAS to use e-commerce to sell goods and service through online Shops of a diversified company can create their online shop for their product such as clothes, books, printer, gadgets, etc. It also provides online buyers with a list of different available products in different sellers.*

## **Abstrak**

*Elektronik dagang, atau dikenali sebagai E-dagang merupakan satu perniagaan di mana aktiviti membeli-belah dan penjualan produk dijalankan atas talian melalui system elektronik seperti laman web. Tujuan utama projek ini dijalankan ialah untuk mengaitkan perdagangan melalui laman web kepada komuniti UNIMAS untuk menjual produk dan perkhidmatan mereka secara atas talian. “iSell” merupakan system E-dagang yang akan memudahkan aktiviti membeli-belah dan penjualan produk di atas talian untuk komuniti UNIMAS. Sistem “iSell” membantu komuniti UNIMAS terutama sekali pelajar untuk membeli-belah dengan harga yang mampu milik. “iSell” ditubuhkan bagi membolehkan peniaga kecil dalam UNIMAS untuk membuat kedai online bagi menjual barangan dan perkhidmatan seperti, baju, buku, pencetak, dan lain-lain. Selain itu, “iSell” juga menyediakan pelbagai senarai barangan dalam talian untuk pembeli yang ingin membeli dari pelbagai penjual.*

## **Chapter 1: Introduction**

### **1.1 Introduction/Background**

The recently published report, according to export.gov, published on 19 August 2019, shows that online e-commerce in Malaysia grown a massive number of users in the era of the 21st century. According to the source, it stated that Malaysia is an attractive market for e-commerce in Southeast Asia due to its dynamic economy and developed infrastructure for digital technologies. Malaysia has approximately 25.84 million active internet users. It caters to 80 percent of the entire population in Malaysia. Furthermore, Malaysia has high rates of mobile phone penetrations up to 93.1 percent, according to the Malaysia Communications and Multimedia Commission (MCMC, 2018). According to the Nielson report, statistics in Malaysia showing that there was 98 percent penetration towards Gen Z, and 99 percent of them owned a smartphone. Of the 32.25 million Malaysians, 27.6 million are social media users, 40.24 million mobile subscriptions, and 24 million use social media on their mobile devices (Koya, Ahmad, Timbuong, Rahim. 2019).

While internet users increase tremendously, the percentage of online shoppers continue to rise as well. According to the survey conducted by MCMC in 2018, the rate increase from 48.8 percent in 2016 to 53.3 percent in 2018 and continue to show a positive trend resulting 6.3 percent increase in regards to gross domestic product (GDP) in 2017. The increasing number of online shoppers is one of the main reasons why there are various digital services, including e-commerce websites, start to grow big.



In Malaysia, there are various e-commerce websites, such as Mudah.my, Carousell, and Shopee, where users can sell and buy either new or used items online. Each of the marketplaces has its distinctive features to attract users in using their services. With the online banking can be accessed in a single tap on the mobile phones instead of the traditional method, e-commerce will have a bright future in providing the best services either to the retailer or the consumer.

With the survey conducted by the MCMC and the growth of either internet users or online shoppers, it is proven that e-commerce can have a massive impact on most of society in Malaysia. This study is to show that there increasing number of demands towards the online marketplace and to proposed a more niche market targeted towards generation Y and Z. Most of the University students came from both generations. It is imperative to understand both of the behavior of the generation or, more specifically, university students to create a suitable e-commerce system that can suit their needs.

Hence, developing an e-commerce web system for Universiti Malaysia Sarawak (UNIMAS) community is one of the worth investing ideas as the primary target basically comes from generation Y and Z that always have access to the internet and an active social media user.

## **1.2 Problem Statements**

UNIMAS community is facing a problem where there is no such platform, particularly at UNIMAS, for the students or staff to perform selling and purchasing used and new items online. Hence, this iSell web system act as a platform for students to buy and sell used, and new items were initiated to ease the students financially and can save more time and reduce effort.

Furthermore, there were numerous risks when buying or selling online. Both of the activities will require the user to put sensitive data online, such as personal phone numbers, banking accounts, home addresses, and many other individual sensitive data. These data can be used by an irresponsible person to manipulate situations and use it to scam others. The concern arises when no secure and reliable platform can act as a medium for Students/staff in the UNIMAS community to sell and buy the desired items. Students tend to use social media (Twitter, Facebook, Instagram, etc..) as a medium to sell their used items. This action contributes to risk as it solely depends on a trust-oriented perspective where the buyers need to put full trust in the seller while purchasing the goods without proof of purchase provided.

On the other hand, Students that went through the final semester have to bring all their items back to their hometown. Since there was no medium to sell their used item, they tend to leave the items as-is. Instead, with this medium, they can sell the item that was unnecessary to bring back to their hometown and can generate some money from there.

Moreover, the University program textbook is expensive. To save some money, some university students will tend not to buy the textbook. Instead, they will Photostat the entire textbook (copyright infringement) or only rely on the lecture notes for the entire semester. With

this iSell web system, students can sell their textbooks quickly, and the buying parties can buy the textbook at a reasonable price. This is a win-win situation for both buyer and seller.

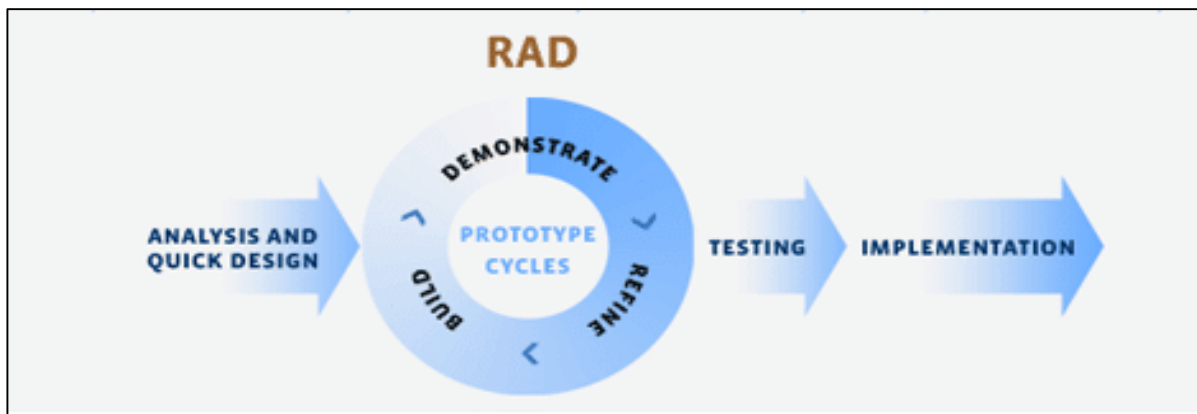
Many students deal with the financial issue during their studies. Sometimes they have to quit their education because of financial issues that they faced. Thus, instead of quitting their study, they can use this platform to do small business and generate some income by selling their products on this website. Hence, it will create opportunity and also encourage them to do business while studying.

### **1.3 Aims & Objectives**

- i. To study and identify various functions, techniques, features, and designs on the various Ecommerce web system that can attract their users to utilize the system to achieve the marketing standard fully.
- ii. To design and develop an Ecommerce web system “iSell” as a platform that can be used for the community of UNIMAS to sell and purchase their used and new items online by presenting a secure and reliable electronic commerce web system.
- iii. To evaluate all the functions and features that been implement on the “iSell” web system by the UNIMAS community as the primarily targeted users.

## 1.4 Methodology

In this project, the methodology that will be used is Rapid Application (RAD) Methodology. Rapid Application Development (RAD) is the process in which the development of the cycle of an application is being expedited. Thus it will shorten the time consumed by producing a high quality of products and also enables on saving more cost and resources (Development, Do, Need, History, & Aspects, 1997). There are several phases in the RAD methodology, which are Analysis and Quick Design, Prototype, Testing, and Implementation. Figure 1 shows all the phases in the RAD methodology.



*Figure 1.1 RAD development life*

### i. Analysis and quick design

In this phase, a deep through analysis of similar existing systems and user requirements observations must be collected. An intense study on existing systems and observations on user requirements will be generated to transform the general idea about the system into an accurate analysis based on the requirements studies. In this case, the expected project scope is the UNIMAS community, which are students and staff. Thus, analysis and observations on UNIMAS community requirements on the e-commerce web system will be study and examine. Their expected requirements on how the system should work

will be collected and analyzed to proceed with the next phase, which is the design phase. Once the requirement analysis is done, it is separated into the logical design and physical design of the system. Logical design is accomplished by using a data flow diagram (DFD), entity-relationship diagram (ERD), and use case diagram. Whereas, physical design involves the designing of user interface and user experience of the system. Different kinds of design will be developed, including architecture design, interface design, database design, and program design (Thuan, 2009). This design phase must be illustrating in detail to give the overall pictures when doing the programming code to build each module and the overall prototype of the system.

## **ii. Prototype**

The prototype cycle starts with the building of a prototype based on the system design. Once a prototype is produced, it will be demonstrated to the user and get feedback. Feedbacks collected from the user will be analyzed, and refinement on the previous prototype will be carried on. These three processes (building, demonstrating, and refining) are emphasized, and the prototype is continually being refined until all the requirements are met. All the design of each of the module prototypes from the design phase will be built in this phase. Each of the modules of the interface, databases, functionality, and so on will be covert into a program and go through the implementation phase.

### **iii. Testing**

In this phase, the overall prototype will undergo testing before deploying it to the users.

All the module prototype will be tested in terms of unit testing, integration testing, system testing, and acceptance testing to ensure that it fully meets the user's requirements.

### **iv. Implementation**

Once the system had undergone the testing phase, it will be deployed to the server for distribution and hosting purposes then the system will be able to be used by the user.

## **1.5 Scope**

This project is focusing on the UNIMAS community (students/staff) that want to commercialize their used and new items in the online platform by offering the lowest price from the actual market price. Mainly all the products publicize in this e-commerce web application are cheapest from its market price.

## **1.6 Significance of Project**

The significance of this project are:

- i. To provide an online E-commerce platform for the UNIMAS community (Students/staff) to commercialize their products, either it is new or used items in a single online platform.
- ii. To help students in gaining side income by selling their used items instead of throwing it away and bring back to their hometown, which will increase their ticket flight cost.
- iii. To aid students that are seeking new or used items that offer the lowest price from the market price.

- iv. To act as a platform that can encourage the UNIMAS community to do business online and gain some income.

## **1.7 Project Schedule**

Figure 2 below shows the estimated duration of preparing the Final Year Project 1 and also Final Year Project 2. The duration takes about 186 days, which starts on 09<sup>th</sup> September 2019 until 14<sup>th</sup> May 2020. Final Year Project 1 consists of Introduction, Literature review, Analysis, and Design. Meanwhile, Final Year Project 2 consists of Implementation and Testing, Conclusion, and Future Work. The illustration of the project schedule shown below.

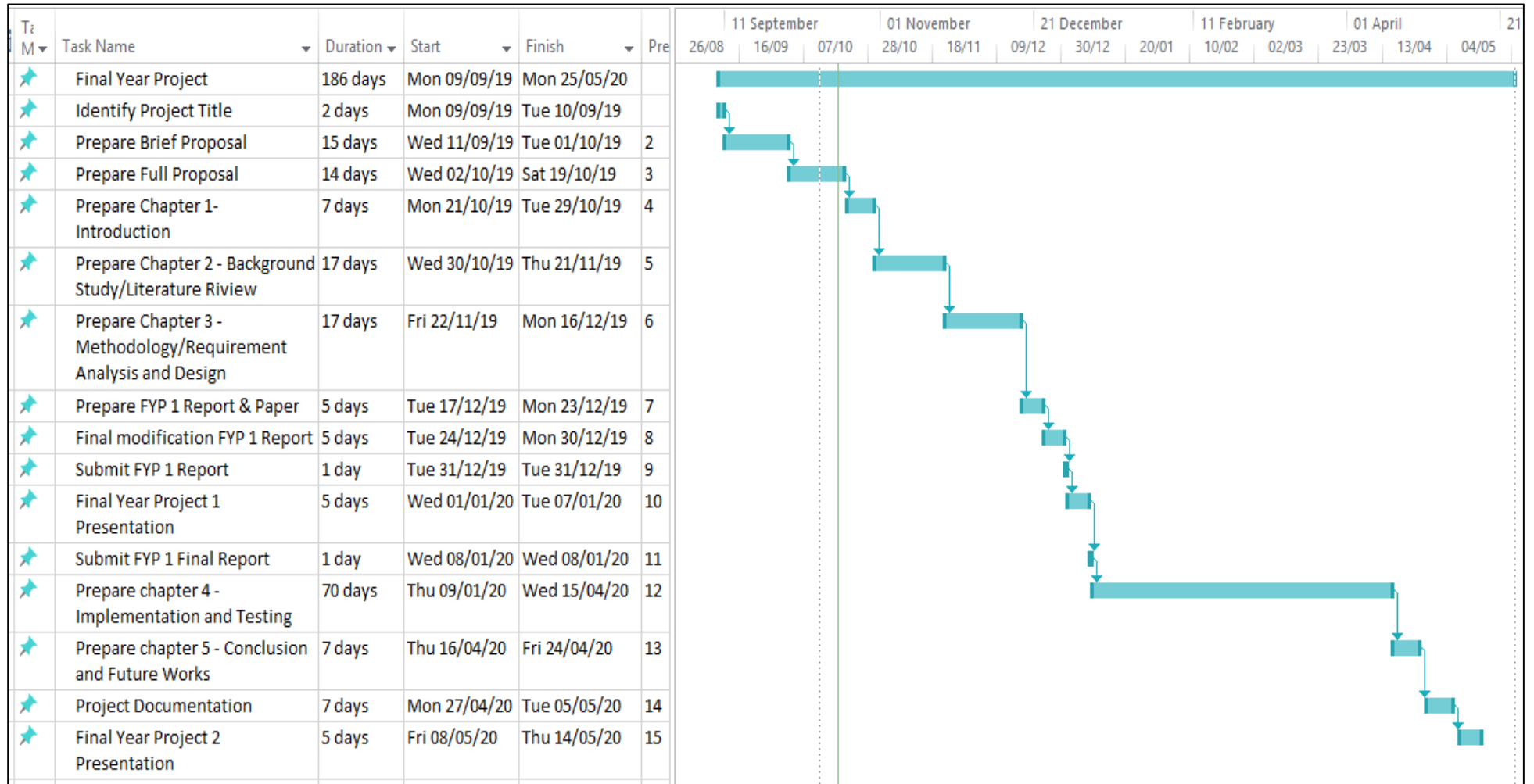


Figure 1.2: Final Year Project schedule